

WHAT IS CLAIMED IS:

1. A magnetically positioned precision holder for at least one optical component in an optical device,  
5 wherein a carrier (2; 3) holding at least one optical component (4) is arranged in positionally adjustable fashion in a housing recess (5) having a precision stop surface (6), magnet pairs (A1/A2 and B1/B2) oriented with identical polarity being arranged, in order to achieve a contact pressure of the carrier (2; 3) against the stop surface (6), in such a way that the one magnet (A1, B1) is located in the wall of the recess (5) and the corresponding magnet  
10 (A2, B2) in the carrier (2; 3).
2. The precision holder as defined in Claim 1, wherein the optical component(s) is/are held replaceably in the carrier (2; 3).
- 15 3. The precision holder as defined in Claim 1, wherein the recess (5) is larger than the space requirement of the carrier (2; 3) and is deeper than the thickness of the carrier (2; 3).
4. The precision holder as defined in Claim 1 wherein the stop surface (6) for the upper side of the carrier (2; 3) constitutes a reference plane (7) for precise positioning of the optical  
20 component (4) in the housing (1) of the device.
5. The precision holder as defined in Claim 1 wherein axes of the magnets belonging to a magnet pair (A1/A2 and B1/B2) line up with one another.

6. The precision holder as defined in Claim 1, wherein axes of the magnets belonging to a magnet pair (A1/A2 and B1/B2) are offset in parallel fashion from one another.
7. The precision holder as defined in Claim 1, wherein axes of the magnets belonging to a magnet pair (A1/A2 and B1/B2) form an angle  $\alpha$  with a vertical (16) that is at an angle of 90 degrees to the reference plane (7).
8. The precision holder as defined in Claim 1, wherein the optical component (4) located in the working position is surrounded on the carrier (2; 3) by two magnets (A2, B2) of different polarity.
9. The precision holder as defined in Claim 8, wherein the magnets (A2, B2) and the optical component (4) are arranged on the linear carrier (2) along a line that corresponds to its translation direction (13).
10. The precision holder as defined in Claim 8, wherein the magnets (A2, B2) and the optical component (4) are arranged on the carrier wheel (3) along a circular line that corresponds to its rotational motion direction about an axis (15).
11. The precision holder as defined in Claim 1, wherein the carrier (2; 3) comprises a detent notch (11a, 11b) for each of the optical components (4).

12. The precision holder as defined in Claim 1, wherein the carrier (2) comprises a handle (12) on its one longitudinal side; and the other longitudinal side contacts a device stop (10) when the optical component (4) is in the working position.
- 5 13. The precision holder as defined in Claim 1, wherein for implementation of a parked position of the carrier (2), the latter can be pulled out of the housing (1) sufficiently that the magnets (A2 and B1) correspond to one another to form an oppositely poled magnet pair (A2/B1).
- 10 14. A method for magnetically positioning a holder for at least one optical component in an optical device comprising:
- providing a carrier for holding at least one optical component in positionally adjustable fashion in a housing recess, said housing recess comprising a stop surface,
- providing magnet pairs (A1/A2 and B1/B2) in said recess and said carrier, said
- 15 magnetic pairs operatively arranged to repel one another and bias said carrier against said stop surface.
15. The method of Claim 14 wherein a first magnet (A1, B1) of said magnetic pairs is operatively arranged in a wall of said recess (5) and a second magnet (A2, B2) of said
- 20 magnetic pairs operatively arranged in said carrier.
16. The method of Claim 14 further comprising means for positioning said at least one optical component in a working position.

17. A holder for at least one optical component in an optical device, said holder comprising:

a carrier operatively arranged to secure least one optical component; said carrier positionally adjustable in a housing recess, said housing recess comprising a stop surface,

5 magnet pairs (A1/A2 and B1/B2) operatively arranged in said recess and said carrier, said magnet pairs operatively arranged to repel one another such that said carrier is biased against said stop surface.

18. The holder of Claim 17 further comprising positioning means for laterally positioning  
10 said optical component in a working position.

19. The holder of Claim 17 further comprising positioning means for rotationally positioning said optical component in a working position.